

Glossary of terms

Biotechnology: historically, the use of biological processes or living microorganisms such as fermentation; currently, includes molecular level techniques such as cloning, genetic engineering.

DNA: deoxyribonucleic acid, the linear macro-molecule that makes up the genetic material of most organisms; generally exists in double stranded helix.

Genetically engineered organisms: organism (or progeny thereof) created by the use of recombinant rDNA technology, as in contrast to traditional cross-breeding; impossible to obtain through conventional breeding; genetic sequences have been modified using molecular techniques; also called genetically modified or transgenic organisms; living products containing DNA from unrelated organisms.

Novel protein (or transgene): the protein that is inserted into a host organism through genetic engineering.

Transgenes: see genetically engineered organism

Antibiotic resistant markers (ARM): genes resistant to antibiotics that are attached to the novel (inserted) gene. When the antibiotic is applied to the new organism, the genes with the ARM survive. ARMs serve as identifiers.

Promoter: the regulatory sequence of DNA that controls the process by which genes are translated into proteins; can also determine the amount of protein produced.

Herbicide tolerant crop: plant that is resistant to otherwise toxic effect of herbicide that is applied.

Herbicide resistance: see above, but applied to ability of a weed/unwanted plant to survive application of an herbicide.

Pest-protected/insect resistant crop: plant that is toxic to insect-pests that ordinarily damage the crop. Most common is *Bt* variety, incorporating the toxin from the bacteria *Bacillus thuringiensis*.

Insect resistance: the ability of a pest to survive the toxin in an herbicide or insect resistant crop.

Refugia: the required planting of a portion of a *Bt* field, in non-*Bt* version of the crop, in order to delay insect resistance. 20% for corn, 50% for cotton that is near corn.

Non-target impacts: toxic effects on non-pest organisms such as beneficial insects, wildlife, soil bacteria.

Gene-flow: the successful movement of genes from one plant population to another, via pollination.

Intellectual property rights (IPRs): (patent) the right to exclusive marketing/development of a product/process, such as a gene or transgene.

Licensing fees: fees paid to the holder of a patent, to use the patented product/process.

Center of Origin: locality where traditional varieties/native species have the greatest diversity; e.g. corn in Mexico.